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SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Genentech, Inc.

De Sauvage, Frederic J.

Levin, Nancy

Vandlen, Richard L.

- (ii) TITLE OF INVENTION: OB Protein Derivatives
- (iii) NUMBER OF SEQUENCES: 2
- (iv) CORRESPONDENCE ADDRESS:
- (A) ADDRESSEE: Genentech, Inc.
 - (B) STREET: 460 Point San Bruno Blvd
 - (C) CITY: South San Francisco
 - (D) STATE: California
 - (E) COUNTRY: USA
 - (F) ZIP: 94080
 - (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
 - (B) COMPUTER: IBM PC compatible
 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: WinPatin (Genentech)
 - (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER:
 - (B) FILING DATE: 19-Dec-1996
 - (C) CLASSIFICATION:
- 25 (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 08/667184
 - (B) FILING DATE: 20-JUN-1996
 - (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 08/579494
- 30 (B) FILING DATE: 27-DEC-1995
 - (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Dreger, Ginger R.
 - (B) REGISTRATION NUMBER: 33,055
 - (C) REFERENCE/DOCKET NUMBER: 985P2PCT
- 35 (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: 415/225-3216
 - (B) TELEFAX: 415/952-9881
 - (C) TELEX: 910/371-7168
 - (2) INFORMATION FOR SEQ ID NO:1:
- 40 (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7127 base pairs
 - (B) TYPE: Nucleic Acid
 - (C) STRANDEDNESS: Double

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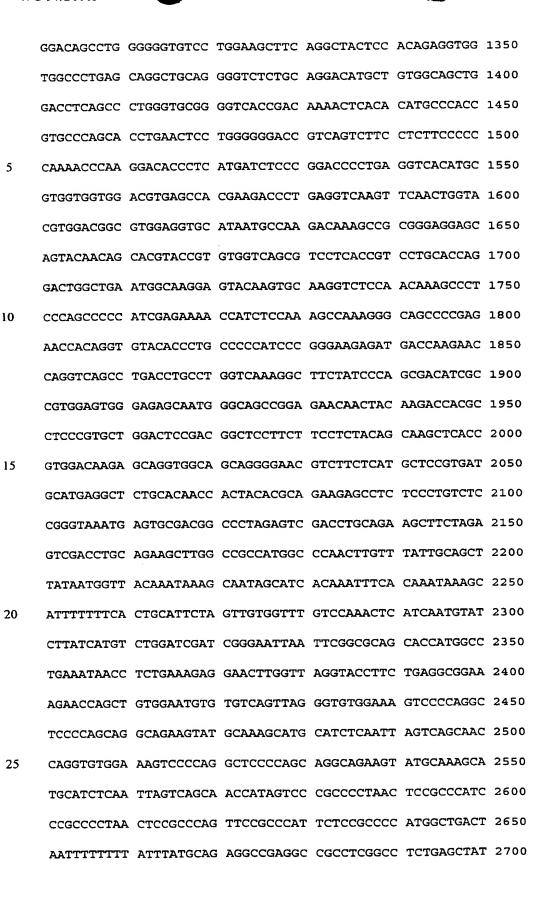
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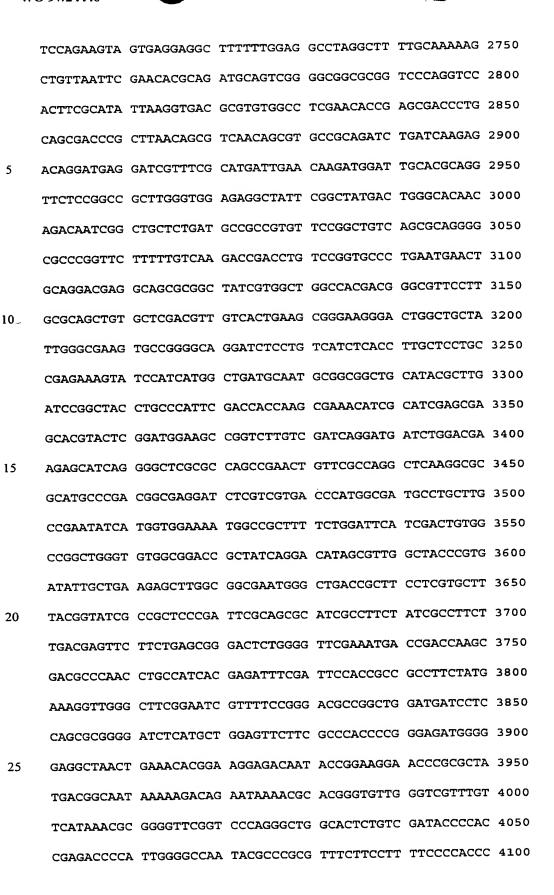
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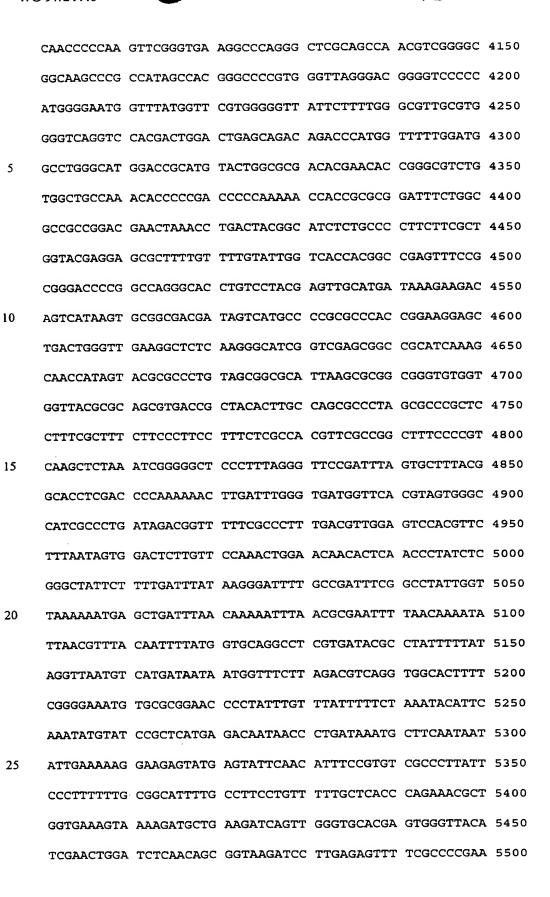
(D) TOPOLOGY: Linear

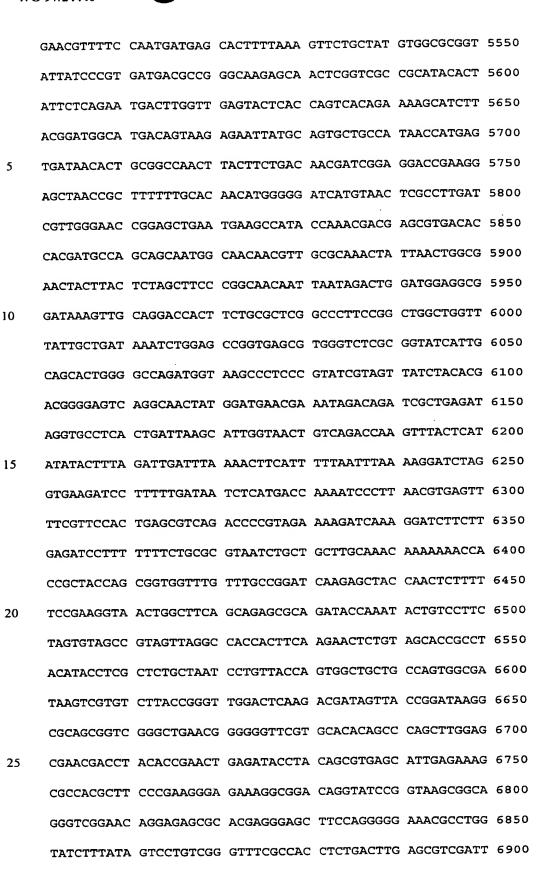
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

TTCGAGCTCG CCCGACATTG ATTATTGACT AGTTATTAAT AGTAATCAAT 50 TACGGGGTCA TTAGTTCATA GCCCATATAT GGAGTTCCGC GTTACATAAC 100 TTACGGTAAA TGGCCCGCCT GGCTGACCGC CCAACGACCC CCGCCCATTG 150 ACGTCAATAA TGACGTATGT TCCCATAGTA ACGCCAATAG GGACTTTCCA 200 TTGACGTCAA TGGGTGGAGT ATTTACGGTA AACTGCCCAC TTGGCAGTAC 250 ATCAAGTGTA TCATATGCCA AGTACGCCCC CTATTGACGT CAATGACGGT 300 AAATGGCCCG CCTGGCATTA TGCCCAGTAC ATGACCTTAT GGGACTTTCC 350 TACTTGGCAG TACATCTACG TATTAGTCAT CGCTATTACC ATGGTGATGC 400 GGTTTTGGCA GTACATCAAT GGGCGTGGAT AGCGGTTTGA CTCACGGGGA 450 TTTCCAAGTC TCCACCCCAT TGACGTCAAT GGGAGTTTGT TTTGGCACCA 500 AAATCAACGG GACTTTCCAA AATGTCGTAA CAACTCCGCC CCATTGACGC 550 AAATGGGCGG TAGGCGTGTA CGGTGGGAGG TCTATATAAG CAGAGCTCGT 600 TTAGTGAACC GTCAGATCGC CTGGAGACGC CATCCACGCT GTTTTGACCT 650 CCATAGAAGA CACCGGGACC GATCCAGCCT CCGCGGCCGG GAACGGTGCA 700 TTGGAACGCG GATTCCCCGT GCCAAGAGTG ACGTAAGTAC CGCCTATAGA 750 GTCTATAGGC CCACCCCTT GGCTTCGTTA GAACGCGGCT ACAATTAATA 800 CATAACCTTA TGTATCATAC ACATACGATT TAGGTGACAC TATAGAATAA 850 CATCCACTTT GCCTTTCTCT CCACAGGTGT CCACTCCCAG GTCCAACTGC 900 ACCTCGGTTC TATCGATATG CATTGGGGAA CCCTGTGCGG ATTCTTGTGG 950 CTTTGGCCCT ATCTTTCTA TGTCCAAGCT GTGCCCATCC AAAAAGTCCA 1000 AGATGACACC AAAACCCTCA TCAAGACAAT TGTCACCAGG ATCAATGACA 1050 TTTCACACAC GCAGTCAGTC TCCTCCAAAC AGAAAGTCAC CGGTTTGGAC 1100 TTCATTCCTG GGCTCCACCC CATCCTGACC TTATCCAAGA TGGACCAGAC 1150 ACTGGCAGTC TACCAACAGA TCCTCACCAG TATGCCTTCC AGAAACGTGA 1200 TCCAAATATC CAACGACCTG GAGAACCTCC GGGATCTTCT TCACGTGCTG 1250 GCCTTCTCTA AGAGCTGCCA CTTGCCCTGG GCCAGTGGCC TGGAGACCTT 1300









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TTTGTGATGC TCGTCAGGGG GGCGGAGCCT ATGGAAAAAC GCCAGCTGGC 6950
ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA CGCAATTAAT 7000
GTGAGTTACC TCACTCATTA GGCACCCCAG GCTTTACACT TTATGCTTCC 7050
GGCTCGTATG TTGTGTGGAA TTGTGAGCGG ATAACAATTT CACACAGGAA 7100

- 5 ACAGCTATGA CCATGATTAC GAATTAA 7127
 - (2) INFORMATION FOR SEQ ID NO:2:
 - (i) SEOUENCE CHARACTERISTICS:
 - (A) LENGTH: 397 amino acids
 - (B) TYPE: Amino Acid
- 10 (D) TOPOLOGY: Linear
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

| Met | His | Trp | Gly | Thr | Leu | Cys | Gly | Phe | Leu | Trp | Leu | \mathtt{Trp} | Pro | Tyr |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-----|-----|
| 1 | | _ | | 5 | | | | | 10 | | | | | 15 |

Leu Phe Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp
20 25 30

Thr Lys Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile
35 40 45

Ser His Thr Gln Ser Val Ser Ser Lys Gln Lys Val Thr Gly Leu
50 55 60

20 Asp Phe Ile Pro Gly Leu His Pro Ile Leu Thr Leu Ser Lys Met 65 70 75

Asp Gln Thr Leu Ala Val Tyr Gln Gln Ile Leu Thr Ser Met Pro 80 85 90

Ser Arg Asn Val Ile Gln Ile Ser Asn Asp Leu Glu Asn Leu Arg 95 100 105

Asp Leu Leu His Val Leu Ala Phe Ser Lys Ser Cys His Leu Pro 110 115 120

Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly Gly Val Leu 125 130 135

30 Glu Ala Ser Gly Tyr Ser Thr Glu Val Val Ala Leu Ser Arg Leu 140 145 150

Gln Gly Ser Leu Gln Asp Met Leu Trp Gln Leu Asp Leu Ser Pro 155 160 165

Gly Cys Gly Val Thr Asp Lys Thr His Thr Cys Pro Pro Cys Pro 170 175 180

Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro



| PCT/US96/20 |
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| | | | | | 185 | | | | | 190 | | | | | 195 |
|----|-----|-----|-----|-----|------------|-----|------------|-----|-----|------------|-----|-----|-----|-----|------------|
| | Lys | Pro | Lys | Asp | Thr 200 | Leu | Met | Ile | Ser | Arg 205 | Thr | Pro | Glu | Val | Thr 210 |
| 5 | Cys | Val | Val | Val | Asp 215 | Val | Ser | His | Glu | Asp 220 | Pro | Glu | Val | Lys | Phe 225 |
| | Asn | Trp | Tyr | Val | Asp 230 | Gly | Val | Glu | Val | His 235 | Asn | Ala | Lys | Thr | Lys 240 |
| | Pro | Arg | Glu | Glu | Gln 245 | Tyr | Asn | Ser | Thr | Tyr 250 | Arg | Val | Val | Ser | Val 255 |
| 10 | Leu | Thr | Val | Leu | His 260 | Gln | qaA | Trp | Leu | Asn 265 | Gly | Lys | Glu | Tyr | Lys 270 |
| | Cys | Lys | Val | Ser | Asn 275 | Lys | Ala | Leu | Pro | Ala 280 | Pro | Ile | Glu | Lys | Thr 285 |
| 15 | Ile | Ser | Lys | Ala | Lys 290 | Gly | Gln | Pro | Arg | Glu 295 | Pro | Gln | Val | Tyr | Thr 300 |
| | Leu | Pro | Pro | Ser | Arg 305 | Glu | Glu | Met | Thr | Lys 310 | Asn | Gln | Val | Ser | Leu 315 |
| | Thr | Cys | Leu | Val | Lys 320 | Gly | Phe | Tyr | Pro | Ser 325 | Asp | Ile | Ala | Val | Glu 330 |
| 20 | Trp | Glu | Ser | Asn | Gly 335 | Gln | Pro | Glu | Asn | Asn 340 | Tyr | Lys | Thr | Thr | Pro 345 |
| | Pro | Val | Leu | Asp | Ser 350 | Asp | Gly | Ser | Phe | Phe 355 | Leu | Tyr | Ser | Lys | Leu 360 |
| 25 | Thr | Val | Asp | Lys | Ser 365 | Arg | Trp | Gln | Gln | Gly 370 | | Val | Phe | Ser | Cys 375 |
| | Ser | Val | Met | His | Glu 380 | Ala | Leu | His | Asn | His 385 | | Thr | Gln | Lys | Ser 390 |
| | Leu | Ser | Leu | Ser | Pro 395 | _ | Lys 397 | | | | | | | | |